

Amendments to the Claims

1-20. (Cancelled)

21. (Currently Amended) ~~The process for manufacturing a valve of claim 20,~~ A process for manufacturing a rotatable plug element for receipt in a conical cavity formed in a valve body, wherein an opening in a side of the conical cavity is in fluid communication with an exterior of the valve and an opening in a base of the conical cavity is in communication with the exterior of the valve, comprising:

molding a plug element without machining, wherein the plug element includes a rigid support structure with a conical exterior surface and a hollow interior with a first opening on a side of the rigid support structure and a second opening on a narrow end of the rigid support structure; and

molding of an array of pliable sealing ridges attached onto the conical exterior surface of the rigid support structure including at least two circumferentially extending pliable sealing ridges with at least one pliable sealing ridge of the at least two circumferentially extending pliable sealing ridges positioned on each side of the first opening formed in the side of the rigid support structure, wherein the molding of the array of pliable sealing ridges includes forming an overmolding with the array of pliable sealing ridges that extends across a substantial portion of the conical exterior surface of the rigid support structure, wherein the molding of an array of pliable sealing ridges includes forming the array of the pliable sealing ridges so that the array of the pliable sealing ridges extends above the rigid support structure of the plug element by about 0.008 inches;

wherein the molding of the plug element without machining includes undercutting portions of the rigid support structure located directly below the overmolding formed from the array of pliable sealing ridges to increase depth of the overmolding below at least one pliable sealing ridge of the array of pliable sealing ridges.

22. (Currently Amended) A process for manufacturing a valve, comprising:

casting ~~an aluminum~~ a valve body without machining, wherein the ~~aluminum~~ valve body includes a conical cavity formed in the ~~aluminum~~ valve body, wherein an opening in a side of the conical cavity is in fluid communication with an exterior of the ~~aluminum~~ valve body and an opening in a base of the conical cavity is in fluid communication with the exterior of the ~~aluminum~~ valve body;

molding a ~~thermoplastic~~ plug element without machining, wherein the plug element is configured and dimensioned for rotatable receipt within the conical cavity for the ~~aluminum~~ valve body, wherein the molding of the ~~thermoplastic~~ plug element further includes forming an orifice in a side of the plug element that is alignable with the opening in a side of the conical cavity for the ~~aluminum~~ valve body and in fluid communication therewith and the orifice in a side of the plug element is alignable with an opening in a narrow end of the ~~thermoplastic~~ plug element and in fluid communication therewith;

overmolding pliable material without machining, having a plurality of sealing ridges protruding therefrom, wherein at least one sealing ridge of the plurality of sealing ridges extends circumferentially about the plug element above the orifice in the side of the plug element and at least one sealing ridge of the plurality of sealing ridges extends circumferentially about the plug element below the orifice in the side of the plug element and at least two sealing ridges of the plurality of sealing ridges extend between the circumferentially oriented sealing ridges with at least one sealing ridge on each side of the orifice in the side of the plug element; and

positioning a biasing mechanism between the plug element and the conical cavity for the cast ~~aluminum~~ valve body, whereby an effective seal is achieved between the plurality of sealing ridges and the unmachined surface of the opening in the side of the conical cavity for the ~~aluminum~~ valve body.

23. (Previously Presented) A process for manufacturing a rotatable plug element for receipt in a conical cavity formed in a valve body, wherein an opening in a side of the conical cavity is in fluid communication with an exterior of the valve and an opening in a base of the conical cavity is in communication with the exterior of the valve, comprising:

molding a plug element utilizing a thermoplastic without machining, wherein the plug element includes a rigid support structure with a conical exterior surface and a hollow interior with a first opening on a side of the rigid support structure and a second opening on a narrow end of the rigid support structure; and

molding of an array of pliable sealing ridges utilizing silicone rubber attached onto the conical exterior surface of the rigid support structure including at least two circumferentially extending pliable sealing ridges with at least one pliable sealing ridge of the at least two circumferentially extending pliable sealing ridges positioned on each side of the first opening formed in the side of the rigid support structure.

24. (Previously Presented) A process for manufacturing a valve, comprising:

casting an aluminum valve body without machining, wherein the aluminum valve body includes a conical cavity formed in the aluminum valve body, wherein an opening in a side of the conical cavity is in fluid communication with an exterior of the aluminum valve body and an opening in a base of the conical cavity is in fluid communication with the exterior of the aluminum valve body;

molding a thermoplastic plug element without machining, wherein the plug element is configured and dimensioned for rotatable receipt without the conical cavity for the aluminum valve body, wherein the molding of the thermoplastic plug element further includes forming an orifice in a side of the plug element that is alignable with the opening in a side of the conical cavity for the aluminum valve body and in fluid communication therewith and the orifice in a side of the plug element is alignable with an opening in a narrow end of the thermoplastic plug element and in fluid connection therewith;

overmolding pliable material without machining, having a plurality of sealing ridges protruding therefrom, wherein at least one sealing ridge of the plurality of sealing ridges extends circumferentially about the plug element above the orifice in the side of the plug element and at least one sealing ridge of the plurality of sealing ridges extends circumferentially about the plug element below the orifice in the side of the plug element and at least two sealing ridges of the plurality of sealing ridges extend between the circumferentially oriented sealing ridges with at least one sealing ridge on each side of the orifice in the side of the plug element; and

positioning a compression spring between the plug element and the conical cavity for the cast aluminum valve body, whereby an effective seal is achieved between the plurality of sealing ridges and the unmachined surface of the opening in the side of the conical cavity for the aluminum valve body.